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ABSTRACT

The conferences were part of a series on postsecondary education policy in Britain. Participants studied the work of the previous conferences and synthesized their main lines of thought. Proceedings included: further education and the development of an industrial society (C. Barnett); further education and industry in the development of a better society (J. Tait); review of the main conclusions of the development conferences; the future of further education: an exercise in the Delphi method of time-scaling (D.C. Spencer); response to reports of the first conference (L. Russell); response to reports of the second conference (J.F. Mann); and a summary of results of the Delphi exercise. Brief bibliographies are included. (MSE)

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Vol 8 No. 14

Study Conferences 75/39 and 75/39B

The Development of FE VI

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FOREWORD

The two conferences reported here form a conclusion to the series of development conferences held at Coombe Lodge in 1975. The series was planned as an integrated project to review the whole field of further education policy in terms of changes in aims and objectives, in processes of government and management, in resources and in the student profile over the next five to ten years.

Participants studied the work of the previous eight conferences and attempted a synthesis of their main lines of thought. Consequently much of the work of the conferences took place in syndicate groups. Each conference was introduced by a visiting speaker who pointed to some of the issues which might be debated during the week, and the conferences closed with presentations of syndicate reports to visiting speakers. In addition to forecasts in their syndicate reports, members attempted to obtain a consensus forecast of the future time scale of certain major developments by means of the 'Delphi' technique of circulating questionnaires.

Correlli Barnett, Writer and Historian.

FURTHER EDUCATION AND THE DEVELOPMENT OF AN INDUSTRIAL SOCIETY

"The given title of this lecture suggests somewhat a mood of distant academic contemplation. In fact, an Englishman in 1975 can only approach such a topic from the point of view of his own shell-hole on a battlefield where thus far we are losing rather than winning; his mood therefore must be urgent, his analysis purposeful. Or, to change the analogy, our function here over these two days is rather like holding a seminar on the bridge of the Titanic on weather patterns in the North Atlantic and their effect on the distribution of icebergs. Indeed I myself see as one of our national weaknesses - certainly a weakness of our intellectual establishment - that we approach subjects not from a practical and purposeful standpoint, but, in various senses of the word, academically.

My own purpose then is practical, an exercise in strategic analysis, and it is to consider the role of British education, and in particular further education, in Britain's decline as an industrial society.

historical factors

But first I would like to sketch the historical nature, scope and duration of this decline as I see it. It is now twenty-eight years since our first post-war economic crisis when Sir Stafford Cripps devalued the pound, proclaimed austerity at home and preached salvation through exports. Like "The Mousetrap" the British economic crisis has achieved a phenomenally long run, though - again like the now closed "Mousetrap" - the stars and supporting cast have changed several times in the course of it. In the late 1940s and on into the 1950s we largely attributed our troubles to short-term or external causes - our weakness after fighting a great war; the rise in commodity prices caused by the Korean conflict and so on. But British leaders and the British public alike still comfortably accepted that we were fundamentally still a first class industrial power; that British shipbuilding, car-building, whatever, led the world. Gradually, however, as we continued to judder along from Go to Stop and back again, it began to dawn that the fault lay not in our stars, but in ourselves. There ensued a gloomy process of self analysis, first among the cognoscenti - economists, economic historians - and spreading out wider to civil servants, politicians and the general public. As a result, and within the last fifteen years (one is tempted to say the last two), the British have swung from face-hardened complacency about their industrial genius to an equally exaggerated demoralisation, where everyone hastens to exchange snide jokes about the design of workmanship of British goods and tell each

other stories about the fabulous service they have received from German/Swedish/French/Japanese products.

Nevertheless it is objectively true that our economic performance since the Second World War has been the worst of any major industrial nation. As a consequence, as we are gradually understanding, we have slipped from near the top of the European league table in terms of standard of living to near the bottom. We have slipped no less in terms of our power and influence. In 1973 our Gross National Product was seven times smaller than the USA's, although our population is only four times smaller. On the other hand our GNP was only three and half times larger than Sweden's, although our population is eight times larger than Sweden's. Which division of power and influence is Britain now playing in? If Britain is compared with our middling-power Common-Market partners like France and Germany, our diminution of importance in the last thirty years becomes even more apparent, for Germany's gross national product is comfortably more than twice ours, while France's more than half as much again as ours. Yet West Germany's population is only a tenth larger than ours: France's actually smaller.

There is a further, and even more disquieting, aspect, to these comparisons: in the twenty years up to 1972 we were slipping behind France and Germany at ever faster rate; our relative decline is accelerating. In the six years up to 1972 Germany increased her GNP by an amount six times larger than we did our own.

I make no apology for repeating these gloomy facts to an audience as well-informed as this, because I think we cannot be too keenly aware of the scale and speed of our disappearance from the ranks of even second-class powers. Unless there is some radical turnabout in our affairs, of which pace Mr. Benn there is as yet no sign, the predictions of Lord Rothschild and the Hudson Institute will be fulfilled that Britain will be amoung the poorest and least important countries in Europe by the mid-1980s. This will have - is already having - an embittering effect on British society, stoking up the forces of conflict and disintegration; it will no less have the gravest implications for the future of Britain as a power. For example, what kind of armed forces will such a poor country be able to sustain?

Nevertheless it marks at least some progress that it is now so generally acknowledged that there is something peculiarly and profoundly wrong with our economic and industrial affairs. Unfortunately there is no agreement over diagnosis. There are a variety of explanations depending on the social or political viewpoint: not enough private enterprise; not enough nationalisation; too much state planning; not enough state planning; the trade unions; the boardrooms, and so on. The economists and the financial pages of the newspapers concentrate on monetary and fiscal policy and the government of the day's management of the economy. The current debate seems to a historian to suffer from the shortcomings that it is (a) too narrowly

doctrinaire, either from a left wing or a right-wing point of view, and (b) that it rarely delves very deep. There is a tendency - even among able economists and City-Page editors - to treat our problems as being relatively novel phenomena which date back to the end of the Second World War at the earliest.

A historian takes a very much longer view than this. Nations - or national characters - as they are today are the consequences of a long process of conditioning; a whole moral, social and historical environment. So it does not seem as baffling therefore to the present writer as it must seem - or ought to seem - to Mrs. Thatcher or Mr. Heath that too much of British private enterprise simply lacks enterprise. It does not seem as baffling to the present historian as it must sometimes seem to Mr. Wilson - though never to Mr. Benn - that most British nationalised industries are not quite up to, say, Renault, in imagination, and scale of thinking and acting. To the historian the form of ownership of industry is in itself irrelevant to its performance and success. Volkswagen was for much of its early post-war career neither a nationalised nor a private industry, but existed in a kind of legal limbo, where first-class designers, production engineers and management simply got on with the job of making and marketing superb products. It is noteworthy that East Germany, a rigid Communist state, has also become an industrial success, given its size. Can it be that it is the fact that Germans are on the job which counts, and not the system? Britain, after all, received 2.7 thousand million dollars in Marshall Aid, as against West Germany's 1.7 thousand million. Indeed, in the five years after the war Britain received in direct grants or loans from America, Canada, South Africa and the International Monetary Fund no less than 8 thousand million dollars. Can it be then that there is something deeply amiss with the British character, British national attitudes, British institutions, and this is the first cause of our calamities? Can it be that the explanation of our failures and confusions lies in the conditioning effect of the entire pattern of our industrial and social history over the last hundred and fifty years, perhaps even longer? A conditioning effect both a cause of, and caused by, our lack of national provision of further education in the same era?

The first and essential point which must be grasped by anyone concerned with any aspect of our industrial shortcomings is that they are not in the least bit novel; that they are not at all simply a matter of the post-war years. A brief backward sketch will illustrate this point.

In the mid-thirties the start of re-armament forced us to take complete stock of our industrial resources, including, perhaps most important of all, skilled manpower, both technical and managerial; for production for war purposes requires for the most part the same kind of plant and capabilities as are needed for the conquest of export markets in peacetime. What did the government find? As the Cabinet Defence Policy and Requirements Committee summed it up, "the most serious factor in the completion of the proposed programme is the limited output of our existing resources."

The files of this Cabinet Committee provide a complete and gloomy amplification of this broad judgement. The British steel industry, for example, was so fragmented, so old-fashioned, so limited in total output that new warships (carriers and cruisers) had to be clad in Czechoslovakian armour-plate But the gravest material bottleneck lay in highly-sophisticated machine-tools for various forms of mass-production. In 19733-7 Germany enjoyed nearly 50% of the world's trade in machine-tools; our share was only 7%. Britain therefore had to buy Swiss, German, Hungarian and American machine-tools to enable the re-armament programme to go forward. Because we had almost no clock or instrument industry, the early marks of Hurricane and Spitfire had to be fitted with Swiss and American instrumentation. The Swiss provided the fuses for our shells - and so the catalogue went on.

Nevertheless it was the shortage of skilled manpower and managers which constituted the biggest bottleneck of all - which strikes a familiar enough note today. Something to do with further education, perhaps - or lack of it? The consequences of Britain's enormous purchases of foreign steel, machine-tools and finished goods during the late 1930s was to run us straight towards the balance-of-payments crisis with which we have lived ever since.

Such then was our industrial inadequacy and consequent financial weakness in the 1930s. It may however be argued that that was in the peculiar and unlucky conditions following the world slump; that before 1914 things were different; that we were then still "the Workshop of the World". As it happens, the Great War provided another and earlier audit of our industrial capability. When Britain embarked on industrial mobiiisation for war in the course of 1915, the extent of British deficiencies and dependence on foreign technology became manifest. Britain produced only half the German quantity of steel, and even then neither of the quality nor of the specialised kinds to be found in Germany. It is a sombre but indisputable fact that Britain averted defeat in the first two years of the Great War only by importing American steel. We had come to rely for modern machine-tools on Germany and America. It was equally found during the early wartime drive for munitions that we had come to rely on Germany for ball-bearings and magnetos, laboratory instruments, gauges, optical glass and many other essential goods. We had virtually no chemical industry at all; no drugs and dyes; these too we had come to rely on Germany.

If one moves back another twenty or thirty years, to the 1870s and 1880s, Britain then certainly appears to be genuinely "the workshop of the world", for in sheer volume and value of exports we comfortably exceeded every other country. Yet even as early as this we had already contracted "the English disease". In 1884 the Royal Commission on Technical Education in an exhaustive analysis reported that Europeans had already passed us in the application of science to industry; had already passed us in the efficiency of their industrial organisation.

Indeed, if one goes even further back into Britain's Victorian heyday, to 1853, just two years after the Great Exhibition, we find Dr. Lyon Playfair, in a book on Industrial Education on the Continent, warning that unless we altered our whole industrial outlook and methods we were bound to be overtaken by other countries. Finally, to go back two years beyond Victoria's reign, to 1835, Richard Cobden wrote after a visit to America that "our only chance of national prosperity lies in the timely remodelling of our system, so as to put it as nearly as possible upon an equality with the improved management of the Americans".

Thus it is that far from being a relatively recent problem, our industrial incapacity dates from the very moment when British technology ceased to have world markets entirely to itself; from the very moment when other countries industrialised themselves and began to compete with us. That it was only in the nineteen-thirties that we began to feel the consequences was owing to the cushioning effect of our vast invested national wealth.

In other words it was not some special British genius for technology and industry - as British myth has it - which gave us our early industrial supremacy, but various chance historical factors which caused Britain to be first into the industrial revolution. It was however only by developing such a genius - energy, organisation, ambition, science, education - that we could have kept up. This we have never done. Innovation and change in Britain have always come too slowly.

factors responsible for decline

The question which must now be answered is why this should have been the case; why right from the 1830s, despite the ever-more frequent warnings about our shortcomings, we have always lagged behind our competitors in efficiency and innovation; and still do, apart from some notable exceptions.

In my analysis the answer lies in a combination of three factors. The first is the conditioning of the outlook of management and workforce alike by our early industrial experience in the second half of the eighteenth century and the first half of the nineteenth; in other words, our peculiar industrial tradition. The second factor lies in the economic myth that grew out of this experience - the myth or doctrine of liberalism, laissez-faire, faith in individualistic free enterprise. The third is the entire thrust of British education during the nineteenth century, which was strongly religious in tone, moralistic, idealistic and romantic - remote from, and antipathetic towards, the competitive industrialised world in which Britain had come to exist.

The second and third factors - that is, liberal free-enterprise doctrine with its hatred of the state, coupled with an anti-industry, anti-technological educational and religious outlook - combined to form a fourth factor; and it is with this factor which we are most concerned tonight. This was the gross

inadequacy of technical and further education of every kind in this country until well on into the present century.

Let us consider these four factors, taking first the conditioning effects of our early industrial experience.

mental outlook of workforce

It is impossible to exaggerate the long-term consequences, social and psychological, of the experience of the workforce in the factory towns of late Georgian and early Victorian Britain under conditions of ferocious competition and uncontrolled exploitation. It was in that era, when people were flooding into the new towns from the countryside and exchanging the slow, individual rhythms of the land for the inhuman overwork of the factory, the cottage for the slum, that the British working class, with its special and enduring characteristics as a nation apart, a culture apart, was created. It was after all from study of the British working-class that Marx and Engels derived their conception of the proletariat. This was when the class-solid, embittered "agin them" attitude of British workers was born. Even British trade unions began life as illegal organisations, unlike in Europe. Here is the explanation of why today Britain is almost alone in Europe in having a "cloth-cap" workforce instead of a bourgeois one; a cloth-cap working-class culture tenacious in its own preservation.

It is a culture which management helps to perpetuate by distinctions between weekly paid and salaried staff; distinctions both in terms of service and of status; in the provision of canteens, washrooms and so on. Indeed the state itself has very largely to perpetuate this separate working-class identity by instituting the council-house; by creating furthermore whole districts of council houses; the clearest of all badges of class.

Our early industrial experience exercised a no less profound and long-lasting effect on the style and outlook of management. Because Britain was the first country into the industrial revolution, it followed that our methods and machinery were primitive. Our machines were evolved by self-educated rule-of-thumb and by trial and error. Our entrepreneurs built their businesses by similar commercial methods, starting small as a local tradesman or craftsman, and expanding by grace of native nous. Science itself was then similarly a matter of self-education and private experiment; a superior form of rule-of-thumb.

Equally the men who actually designed and built the early machines were traditional craftsmen, though often self-educated in principles of mathematics and engineering, who learned how to do the new things as they went along, and passed on their knowledge verbally to their apprentices.

There was therefore in British industry right from the start a tradition of the resourceful amateur, self-taught on the job, rather than the man specially and systematically trained. This was true all the way from the boardroom to

the bench. From this arose a potent British myth which certainly survived widely until the 1930s and still survives today in certain unregenerate sectors of British industry - the myth of the "practical man". The myth of the "practical man" carries with it, contrariwise, a positive mistrust of the application of intellectual study or scientific research to industry or marketing; a deep suspicion of the very kind of highly trained and theoretically-educated man European and American industry looked for from the start. In 1850, for instance, when Britain appeared to be at the peak of her industrial supremacy, but when Cobden and Playfair were already noting the dangers inherent in our methods and outlook, The Economist was writing that "the education which fits men to perform their duties in life is not to be got in school, but in the counting-house and lawyer's office, in the shop or the factory."

liberalism

This myth of the practical man, the individual entrepreneur competing with other individual entrepreneurs, is linked to the second factor in our decline - the economic and social doctrines of liberalism. These may be summarised as a belief that the prosperity and welfare of the nation are best promoted by leaving everything to individual initiative and the self-regulating mechanism of a free market - not only the future of industry and agriculture, but also town-planning, housing, health and national education. Liberal doctrine provided the intellectual justification for the untrammelled competition of "practical men". Perhaps even more important was that it provided a new intellectual justification for a deep-seated English dislike of being organised a dislike which can be traced back to the seventeenth century and beyond. Indeed the whole thrust of English history has been against central or large scale organisation, and for the Englishman's right to do as he pleases under the law. It is what Englishmen meant by liberty; the essential distinction they perceived between English life and the life of foreigners under absolute monarchies.

Nevertheless it meant that we entered the industrial era - the era of organisation and ever more complex organisation - with a rooted dislike of organisation, and the larger and more comprehensive the organisation, the greater the dislike. The consequence of this dislike, as fortified and codified by liberal doctrine, were well expressed by Matthew Arnold, intellectual, poet and her Majesty's Inspector of Schools, in 1869:

"..... We are left with nothing but our system of checks, and our notion of its being the right and happiness of an Englishman to do as far as possible what he likes, we are in danger of drifting towards anarchy. We have not the notion, so familiar on the Continent and to antiquity, of the State - the nation in its collective and corporate character, entrusted with stringent powers for the general advantage, and controlling individual wills in the name of an interest far wider than that of individuals."

In the course of the century since Arnold made this judgement, there has been of course an immense extension of the role of the State in Britain,

not least as a consequence of the two world wars. However, each development of this role - in education, for example, to cite a crucially important case - has taken place against the grain of English prejudices, and, compared with European countries, at long delay. Even now, and leaving aside doctrinaire socialists, we lack the positive attitude of the French towards dirigisme in economic planning. Those British still suspicious of the Common Market are so largely because it is, so far as it goes, a European-style state writ large. Yet in the critical period 1860-1914 it was the contribution of the European state in the fields of education, social welfare and development of the national economy, and, contrariwise, the absence of an equal contribution by the British state which constituted a major factor in Britain's increasing backwardness. I will return to this later.

religious revival

The third factor which deeply conditioned the British outlook towards industrial questions and industrial progress lies in the religious revival of the late-eighteenth-century and early nineteenth-century. This may seem a somewhat unexpected contention. But in the first place non-conformism in its concern for the individual soul and its existence outside a centralised church reinforced the prevailing individualism and localism of English attitudes and institutions. More important however was early-nineteenth-century religion, unworldliness or other-worldliness. The English religious revival was really an aspect of the Romantic Movement. It held up before men a vision of the ideal, like Pre-Raphaelite stained glass; the morally ideal; it was powered by passionate emotion. Very different from the worldliness of Georgian Anglicanism and the cool rationality of Georgian dissent. In the course of the nineteenth century this idealistic romanticism burned deep into the British affecting the lower-middle-classes through the chapel and the upper-classes through the public-school. There is of course nothing inherently incompatible between high religious idealism and the achievement of commercial and industrial success - as the example of such families as the Rowntrees serve to demonstrate. Unfortunately such a fusion was not general. Rather, the whole bias of British education and upbringing in the nineteenth-century was away from the realities of the industrialised world of the era, and from such topics as science and technology: more in conscious opposition to them. The eighteenth-century tradition, established in the Dissenting academies, of a functional education equipping a boy to make his way in the world failed to develop, and instead withered away. Dr. Arnold of Rugby, who did more than anyone to create the character of British public-school education, averred:

> "Rather than have science the principal thing in my son's mind,
> I would gladly have him think the sun went round the earth,
> and that the stars were so many spangles set in the bright blue
> firmament. Surely the one thing needed for a Christian and
> Englishman to study is a Christian and moral philosophy."

Victorian education

So the new or re-vamped public-schools did not set out to equip their pupils to lead great industrial enterprises or a great industrial nation, but to turn them into Christian gentlemen, able by sheer character and example to rule the lesser-breeds in the Empire. As late as 1928 the Headmaster of Harrow, Dr. Cyril Norwood, wrote in a book on education:

> "For what has happened in the course of the last hundred years is that the old ideals have been recaptured. The ideal of chivalry which inspired the knighthood of mediaeval days has been recaptured in the tradition of English education which holds the field today."

I will not dwell on the characteristics of the Victorian public-school since our main concern is with further education. However, the public-school is of crucial importance in our decline, both because it moulded the governing class which ruled Britain between 1860 and 1940, and also because Victorian Oxbridge followed the example of the Arnoldian ethic and content. Let me summarise then Victorian public-school education:

(1) content: religion and the classics; nothing related to the contemporary world; science very late and half-hearted.

(2) inculcated values: conscientious routine administration of an institution as it existed; that is, the qualities of the prefect.

The very qualities which Britain needed - and needs - in its elites were those most discouraged: curiosity, driving energy and ambition, a desire to innovate. Were not these the qualities of the cad, not to say the bounder?

It followed that Victorian Oxbridge did not exist to equip people to take on Germany and the United States in ferocious industrial competition. It existed primarily to produce clergymen; to a lesser degree creates men for the professions, the public and imperial services. The ideal throughout was not functional preparation for making one's way in life, but the Newman one of a liberal education. In 1887 - and little had really changed by 1937 - an Oxford man advised parents that "Oxford will teach the graces which lend richness and interest in life." For the average fellow, according to this witness, Oxford would prove "a means of employing pleasantly and not unprofitable, the years between boyhood and manhood, an opportunity of gaining a tone in the society of well-bred and cultivated men." Oxford's function was "humanising the man rather than turning out the expert." The Class One Examinations for the various public and imperial services provide a documentary record of the further education expected of our ruling class. In 1870 possible marks for Greek and Roman studies were twice the totals for French or German studies or political economy - and taken together, a third more than allotted to the entire field of science. By 1900 this supremacy of the classics had only been slightly eroded. Only after 1900

were politics, science, psychology and economic history included; but of course Marxism did not figure. Even now there was no formal study of the contemporary world. As late as 1917 the Civil Service Commission acknowledged when introducing a current affairs paper:

> "..... candidates who, while devoting themselves to their individual studies, have nevertheless retained an alert and inquisitive mind and have kept their eyes open to the most important facts in the world about them, should have seized and retained a certain amount of knowledge - scientific, economic and political."

The end-product of British upper-class education between 1860 and 1914 - one might well say 1940 or 1950 - may therefore be summed up as largely ignorant and largely incurious people remarkably out of touch with the realities of an industrialised world. Harold Macmillan - and his case is by no means unique - wrote of himself as he was when he first stood as parliamentary candidate for Stockton in 1923:

> "I had no practical knowledge of the world in which I was to move. I had never been to Teesside or even Tyneside. Apart from Glasgow, where my printer cousins lived, I had scarcely been to an industrial town. I had never seen the great ironworks, steelworks, engineering works, shipyards, which had been built up on the banks of the rivers of the North of England and Scotland. Nor, except for the War, had I any actual experience of living among an industrial population."

The higher prestige enjoyed by the City than by industry is a reflection of a further important effect of a public-school-Oxbridge education's emphasis on turning boys into "gentlemen". To manipulate money was more respectable than going into "the works"; our governing class had been taught to look down on technology and industry and look for a career in the professions, the public service or governing the Empire. An immense gulf of mutual irrelevance existed between the "practical man" of industry and the classics mandarin. Even today only 42% of executives in Britain have degrees, as against 89% in France and 83% in America. When the Oxbridge man did go into industry, perhaps the family firm, gentlemanliness too often told against such caddish manifestations as pushfulness and ruthless innovation. An overseas-trade man in the Foreign Office noted in the 1930s:

> "Even if one had an important report affecting a matter in which hundreds of thousands of pounds was involved, it was impossible to talk to responsible people in the firm concerned except on Tuesdays, Wednesdays and Thursdays - and perhaps Friday mornings: from Friday to Monday business seemed to be at a standstill."

The national danger in the whole nature and bias of Victorian upper-class education was perceived by Herbert Spencer as early as the 1860s:

> "That which our school-courses leave almost entirely out, we thus find to be what most nearly concerns the business of life. Our industries would cease, were it not for the information which men acquire, as best they may, after their education is said to be finished. The vital knowledge - that by which we have grown as a nation to what we are, and which now underlies our whole existence - is a knowledge that has got itself taught in nooks and corners; while the ordained agencies for teaching have been mumbling little else but dead formulas."

If the British leadership class was as ill-educated for its functions as this, the schooling of the rest of the British people was unlikely to be better conceived. But the vital point about the education of the rest in the late nineteenth century - this period when all our present attitudes and problems were originating - is that because of our dislike of the State, such education hardly existed at all. And this was specially so of further education of all kinds. Our workpeople, our foremen and junior managers, our middle-management received only the sketchiest general education and virtually no systematic professional or technical training.

The fourth factor, then, in our unsuccess as an industrial nation from 1860 to the present day lies in the grievous lack of all kinds of national education in the late Victorian era, and the belatedness and inadequacy of our efforts to repair this lack between 1900 and 1944. Moreover the effects of this lack were worsened by the strong anti-technological bias of such education as did exist.

Once again, I will not dwell tonight on primary and secondary education, except to recall that only after 1870 did we have universal elementary education, and then on the standards of the workhouse, and only after 1902 a coherent state system of secondary education; and that for long this state secondary education could only cope with a minority of children. Yet good and universal school education is the essential foundation for all kinds of further education. Let me quote from the report of the Schools Enquiry Commission in 1868:

> "..... we are bound to add that our evidence appears to show that our industrial classes have not even that basis of sound general education on which alone technical education can rest ..... In fact our deficiency is not merely a deficiency in technical education, but ..... in general intelligence, and unless we remedy this we shall gradually but surely find that our undeniable superiority in wealth and perhaps in energy will not save us from decline."

The Schools Enquiry Commission thus exactly forecast what has happened to this country during the century that has elapsed since they wrote.

The grave inadequacy of our further education, especially technical, was the subject of repeated analysis and warning in the late nineteenth century and after. Take the report of the House of Commons Select Committee on Scientific Instruction in 1867-8. Of British workmen and foreman the Committee found:

> "Their education has been received in elementary schools, and owing to the defective character of the education in some of those schools, it is rarely sufficient to enable them to take advantage of scientific instruction at a later period."

So here again is the perpetuation of the learn-it-on-the-job, rule-of-thumb craftsmen, in contrast to his well-educated and properly trained European opposite number. Of the next layer up - what this Commons Committee called smaller manufacturers and managers, and what would be called middle-management today - the Committee observed:

> "Unfortunately this division may be disposed of in a very few words. Its members have either risen from the rank of foremen and workmen, or they are an off-shoot from the class of smaller tradesmen, clerks etc. ....."

The crucial importance of this low quality of middle-management as a factor in British decline is emphasised by the observations on the training of European middle-management by the Royal Commission on Technical Education in 1884:

> "Your commissioners cannot repeat too often that they have been impressed with the general intelligence and technical knowledge of the masters and managers of industrial establishments on the Continent."

Now let us look at our top management and boardrooms in this high Victorian era when our competitors were beginning to surpass us. According to the Commons Select Committee already quoted, if top management had risen from the bottom, "Any knowledge of scientific principles which they may have acquired is generally the result of solitary reading, and of observations of the facts with which their pursuits have made them familiar." Here again then is the self-taught "practical man".

The Royal Commission of 1884 had this to say about the evening schools in Europe where workers could continue part-time scientific and technical studies:

> "..... the evening science teaching was conducted by professors of higher standing than, and of superior scientific attainments to, the ordinary science teachers who conduct courses in some of the largest and most important of the manufacturing centres of this country. In the case of machine construction, the models and materials for instruction were superior to those found in similar schools at home."

Of the German polytechnic system this Royal Commission reported:

> "To the multiplication of these polytechnics may be ascribed the general diffusion of a high scientific knowledge in Germany, its appreciation by all classes of persons, and the adequate supply of men competent, so far as theory is concerned, to take the place of managers and superintendents of industrial works."

In England there is still a great want of this last class of person .....

We can now sum up the reasons why Britain failed to display industrial dynamism once the initial wave of industrialisation was spent. Whereas Britain's rivals developed by the mid-nineteenth-century not only the necessary skills for continuous technological advance, but also - and perhaps even more important - the requisite mental outlook, Britain did neither. By the end of the century British backwardness was becoming obvious enough to form the topic of newspaper campaigns instead merely of expert bodies of enquiry. British industrial deficiencies were now such that they could only have been repaired by a massive programme of reconstruction and capital investment; except in wartime this did not take place. To repair her deficiencies in industrial skills and reform her basic industrial outlook required a no less massive programme of education; indeed, an educational revolution at minimum delay. This revolution did not take place. Between 1900 and 1944 Britain gradually constructed a national system of education; gradually expanded further, especially technical, education always in the teeth of doctrinal prejudice against state activities and the cost to the taxpayer, our improvements - the Haldanian universities, the creation of polytechnics and so on - always coming too little and too late.

education between the wars

In 1902 there were seven universities in England for a population of 31 million; twenty-two in Germany for a population of 51 million. In 1908 Germany possessed ten technical universities with 14,000 students. We had none - only technical schools with fewer than 3,000 students. A historian of British education writes of British education in 1902 that it amounted

> "with a few brilliant exceptions such as Owen's College, Manchester, to little more than congeries of technical and literary classes; a small number of polytechnics, mainly in London, a rather larger number of organised science schools and evening science and art classes ....."

Owen's College, renamed the Manchester College of Technology, Britain's answer to the great German technological institution of Charlottenburg, numbered in 1902 150 day-students against thousands at the German college. In the United States there were 484 men's and 162 women's colleges and 48 schools of technology for a population only two-and-a-half times greater than Britain's.

Even after the 1902 Education Act general and further education was slow to reach the scale really needed. Fewer than twenty first-class technical schools were built between 1902 and 1918. One reason for this laggardly progress lay in the myth of the "practical man". As the Report of His Majesty's Inspectors of Education for 1908 put it:

> "The slow growth of these technical institutions is, however, in the main to be ascribed to the small demand in this country for the services of young men well-trained in the theoretical side of industrial operation and in the service underlying them."

And on into the 1920s and 1930s the British remained a largely ill-educated and ill-trained nation. In 1921 only 19% of the population between 14 and 17 years of age were in full-time education. In the 1920s only 12% of children from elementary schools went on to secondary, technical or other full-time education. In 1927 a private investigating committee analysed the fragmentary nature of British technical education. In Britain in 1927 fourteen institutions of university rank offered courses in mining engineering to 200 students; in Germany there were three times as many students in just four mining colleges. The same committee noted the poverty of the equipment in many British technical schools. Between 1922 and 1939 the number of students in British universities studying science and technology rose only from 9,000 to 10,000; Germany had had 24,000 even before the Great War.

It is therefore little wonder that when Britain embarked on rearmament in 1936 that the programme was shackled by want of skilled management and skilled labour. Yet, in the late 1920s just as in the 1900s, one reason for this want lay in the self-perpetuating rule in industry of the "practical man". As the Balfour Committee on Trade and Industry put it in 1929:

> "The available information makes it clear that the present response of leaders of industrial and commercial enterprises to the educational efforts made to train candidates for entry into the higher grades of these organisations is much less certain and widespread than in certain foreign countries, e.g. Germany and the United States."

This Committee also noted that though since the Great War there had been much State-aided research in Britain, the results were often neglected by industry:

> "Before British industries, taken as a whole, can hope to reap from scientific research the full advantage which it appears to yield to some of their most formidable rivals, nothing less than a revolution is needed in their general outlook on science; and this change of attitude is bound to be slow and difficult, in view of our old and deeply rooted industrial traditions."

In its final report the Balfour Committee summed up the long term effects of British failures in education, especially further education, and the consequent survival of the outlook within British industry of the first industrial revolution, drawing attention to

> "The conservative habits of mind which prevent many British employers from pursuing so energetic and (as it appears to them) so ruthless a policy of scrapping old plant and replacing it by new as their competitors (say) in America or Germany, and the corresponding qualities of mind which led many workmen to cling tenaciously to obsolete trade customs and lines of demarcation and thus prevent them from co-operating to the full in getting the best value out of machinery at the lowest cost."

educational provision today

Now, my own investigation as a historian really ends with the run-up to the Second World War. But I have to ask: how much has this picture basically changed today? And in regard to education, have we even now overcome our earlier failures, both in terms of the quantity and quality of educational provision, and also in terms of the thrust, the ethos, of our education. As recently as 1967 the Plowden Report wrote:

> "Comparisons with other countries - all of them more recently industrialised than Britain, but all now at a similar stage of economic development - suggest that we have not done enough to provide the educational background necessary to support an economy which needs fewer and fewer unskilled workers and increasing numbers of skilled and adaptable people."

So I would like to end by asking some questions to which I hope the conference will be able to find some answers. Is our general education, whether private or state, designed to provide what I might call a functional education, i.e. an essential foundation for career-training, or does it still hanker after the Victorian ideal of a "liberal education" as a good in itself. Is our further education - university, polytechnic, professional, technological - yet the equal of that provided in say, Sweden, Japan, America, France or Germany? Are our business and civil-service elites yet as thoroughly professionally trained as competing elites abroad? Do we need to create our own Grandes Ecoles, especially in regard to administration?

And then as well as the question of professional knowledge, there is the question of attitude, of motivation. Does our educational system even now promote a positive enthusiasm towards making a success of an industrial society - towards making a career in industry?

Because, as it seems to me, it is upon our national education that largely depends whether our hundred-year-old decline is to be reversed, or whether it will continue, and not merely continue, but continue to accelerate."

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Discussion Arising

Mr. Barnett's paper stimulated participants to raise a number of issues, many of which formed the background for discussion during the week. First, a participant commented that the percentage of the GNP spent on education had increased over the years. Was education a luxury which we might no longer be able to afford, or was there a worthwhile pay-off for this vast investment?

Another issue raised was that of numeracy. One member said that the importance of literacy was currently being stressed, with the setting up of the government sponsored training scheme for adults. Yet, even if they were unsuccessful in some cases, schools did tend to stress the importance of literacy and concentrate less upon numeracy. Surely then, the chances were that there were more adult innumerates than adult illiterates. If technical education in FE institutions were to be successful, it must be built on a foundation of numeracy already created in the schools. Another member suggested that as the schools seemed to concentrate on literacy, yet were

apparently unsuccessful, their approach might be wrong. Perhaps a centrally organised scheme such as the current campaign for adult literacy would work better, and if so, it would possibly be followed by a parallel scheme for numeracy. Another member suggested that colleges of FE needed an incentive to make them more enthusiastic about education for numeracy. Subjects such as mathematics could be given more points than leisure subjects so that colleges would be encouraged to recruit more students.

The debate then broadened to discuss the utility of the product produced by the colleges. In what way were the students going to contribute to a better society? Some members felt that in a society which seemed to be on the edge of survival, the important thing was to create a generation with the technical ability to invent a technology which would allow us to simply have enough to eat. This was far more important than producing an enlightened, cultured generation. This led eventually via a discussion of the characteristics of the British as a nation to a debate about the education versus training dichotomy. A member asked whether our constant harking back to the past was a cause of our industrial difficulties. Mr. Barnett thought that this was a real problem. We were taught in this country that we won the war, that our past was glorious, so we did not begin afresh, like people in other countries who preferred to forget their past. Another aspect of the British character which did not help the UK to be a strong industrial nation was its tolerance. Whilst kindness and tolerance were apparently virtues, they could mean kindness towards the second rate and tolerance towards the dud. One of the advantages of North Americans was their capacity for self criticism. Finally, on the question of the relative importance of education and training, a member said that the well educated man was one who "knows something well and can do something well". Mr. Barnett found this a useful aim for FE. It was the Victorians who had split learning into liberal education and technical education, and elevated the status of the former. There was a danger that in reaction to this, FE would concentrate overmuch on technical education. There was a need to return to the basic principles of the dissenting academies - that there was no dichotomy - that people need to be taught both to make their way in life and to make wise judgements. We must recreate this balance in modern terms."

Sir James Tait,
Former Vice
Chancellor,
The City
University.

FURTHER EDUCATION AND INDUSTRY IN THE DEVELOPMENT OF A BETTER SOCIETY

"From the papers circulated for discussion at this conference let me extract a comment made by Professor Swift[1] of the Faculty of Educational Studies at the Open University. "Education, which I am beginning to define as access to knowledge for everyone whenever they desire or need it is becoming a legitimate goal and. . that traditional schooling, which regards education as the preparation of a certain age group for work, must die if we are to educate." To my mind this statement perpetuates the worship of learning for its own sake and yet again denigrates knowledge which may be helpful to those who have to earn their living on leaving school or university.

Dr French[2] referred to this in his paper in this series when he wrote "there are countries - and the UK is a prime example - in which it has been regarded as almost indecent to include any vocational element in the secondary school programme".

But the problem is not new. The need to earn our living and to compete in world markets has been with us for over a hundred years and in 1879 we find Silvanus P Thompson saying "there is no question whatever but that the persistent neglect of technical education in England will sooner or later ruin her in the markets of the world". Interest in technical education about that time was stimulated by the Great 1851 Exhibition followed by the 1867 exhibition in Paris at both of which it was blatantly obvious that Britain lagged seriously behind other countries in the applications of science to industrial developments. The work of Lord Kelvin and Lord Playfair to remedy the situation probably resulted in the formation of the Mechanics Institutes and the Polytechnics but they were devoted to craft skills and the poorer classes. At university level the time was ripe for change and a huge leap forward was taken somewhat earlier by the foundation of University College, London. The study of mathematics and natural philosophy was included but it was stated in the Articles in February, 1833 that the lucrative arts and professions were to be excluded. The college was founded "rather for another class of science, the knowledge of which is not profitable to the possessor from a pecuniary point of view, but which exerts a great influence on the wellbeing of society."

Clearly the isolation of the universities from the real world outside was to be preserved and not contaminated by filthy lucre!

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1 Professor D F Swift, Education and Society, The Development of FE V. Coombe Lodge Report Vol. 8. No. 8. 1975.

2 Dr H W French, The Present Problems and Position relating to Vocational Education, The Development of FE II. Coombe Lodge Report Vol. 8. No. 5, 1975.

When I left school at the age of fourteen years, addmittedly nearly half a century ago, I imagined that those who stayed on for a further four years and especially those who went on to University had in mind some career objective like being a doctor, lawyer or teacher which required higher educational qualifications. In many cases this was true but I think it is less true, relatively speaking, today. The sad fact is, that in spite of their earlier maturity, students are being virtually discouraged from giving any thought to their choice of career or their reasons for going to university until the end of their first year in residence. Within this first year they are permitted to choose from a large number of packaged units and their choice may not lay the best foundation for their later studies. To my mind this has other disadvantages.

Firstly many students find the change from school to university emotionally disturbing. Under the old arrangements students were able to share their problems and difficulties with other students who had similar interests and had joined the same course. Unlike the new system they had daily contact with the same group of students and were able to form stable friendships and many friendships so formed have lasted throughout life. Under the new arrangements as a student moves from class to class he is constantly seeking new faces and it is no longer possible to share all his problems with the same coterie of friends. These instabilities are reflected in the rapid growth of counselling services which attempt to remedy the situation.

Secondly, so far as course content in concerned a three year course is effectively reduced to two years at a time when there is an explosive expansion of knowledge not only in scientific knowledge but even in the field of Creek civilisation. This is bad.

Even worse is that fact that the majority of students seem no better equipped to make a decision about their future at the end of their first year than when they enrolled. The consequence is that many students drift into a course of study without thought about where it will lead after graduation when they may find that the jobs available to them are no better than those they might have got at school leaving age but they are now three years behind in the queue. This frustration after a pleasant uncommitted existence at college or university makes them regard any kind of job in the outside world as distasteful and to be avoided at all costs and so they opt to continue their studies as Masters level or to go for research.

It seems to me that many graduates who wish to continue their full-time education should be expected to seek appropriate professional experience in the outside world before committing themselves to a further period of shelter within the hallowed walls. Indeed Lord Willis Jackson, an eminent engineer and outstanding teacher, stated openly and often that graduates who continued in the university until they gained their Doctorate found it increasingly difficult to adapt themselves to a career in industry and they were potentially no better than when they first graduated.

The arguments for life time education were critically examined by Sir Kenneth Berrill[3] when delivering a Foundation Address at Birkbeck College in 1972. He pointed out that, "it is yesterdays young people - todays mature workers - who provide the goods and services (and pay the taxes) which makes all todays education possible". This unpalatable fact is, also, no longer true when twenty percent of every pound being spent by the Government has been borrowed. This cannot go on.

Sir Kenneth points out "the demands of today's young people for education - as with demands for most health, education and welfare services - are virtually insatiable. We have now in Britain one of the longest periods of compulsory schooling in the world - 5 to 16 - eleven years. Nor is this all. On both sides of the compulsory eleven years this first cycle of education is spreading in a way which yesterday's young people never dreamed of. The huge sixth forms, the ever growing proportion going on to full-time higher education and some through to MSc's and PhD's."

Sir Kenneth refers to two extreme views. One that lifetime education should be a legal right - like lifetime rights to the health service or to social security (and indeed it might be funded in a similar way). Adults would then be able to take courses in whatever interested them - full-time, part-time correspondence self-taught as appropriate.

To me this seems quite ridiculous though I am not against continuing education and I am enjoying the privilege of attending Adult Education classes in my spare time.

The other extreme viewis "that the first cycle of education (even if that first cycle lasted twenty years from nursery school to PhD) should not attempt to teach specialist skill at all but try to create the right approach to adult life - learning how to learn, an enquiring mind, a critical judgement, a broad interdisciplinary outlook and approach. The specialisms, the particular skills and techniques can be learned later, in lifetime recurrent education, when one knows exactly what one wants."

To me this seems an excellent recipe for producing perpetual students because anybody who embarks on this course will never know exactly what they want and presumably their dependents will have their food and shelter provided by social security. Far better to decide on a chosen career and even if one has made a mistake the fact of having worked towards one objective will make it much easier to approach the second. The man who never made a mistake did not go very far.

Admittedly to choose a career in England is not easy when most things go on behind closed doors - it is much easier in Baghdad where most operations and transactions take place on the pavement. But surely one of the greatest needs is to develop a careers advisory system so that school leavers and those who

3 Sir Kenneth Berrill. Lifetime Education. The Outlook in Britain. Foundation Oration. Birbeck College, 1972.

intend going into further and higher education have some idea of their objectives. By age 18 years people are now legally adult and expect to reach conclusions about political questions. Is it not absurd if they have not given serious thought to the kind of life they wish to live and how they will provide food and shelter for themselves and their dependents?

In the paper by Professor Swift to which I referred earlier he says "The ivory tower present in universities involves an academic ring of confidence - I hesitate to call it a halo - which it offers to entrants and denies to non-entrants" and he goes on to say "During his three or four years at university the institution transforms that ring of confidence into a ring through the nose, for he comes to believe the label of ability that institutional life has invented for him." These are strong words and I would rather put it that academics who devise courses of study lasting three years or more which wholly ignore the simple fact that come graduation the graduate will have to earn his living are being more than unfair. I believe that if full-time higher education is to be made available to all - and it seems that the former requirement of two A-levels as a condition of entry is going out of fashion - it ought not to be based on envy of the education of young gentlemen of leisure in a bygone age. Learning for its own sake has an emotional appeal hallowed by time and tradition but I am inclined to agree with the words attributed by Robbins to Confucius, that "nobody would dream of spending three years on full-time education unless there were material gain at the end." The wisdom of Confucius has been blurred by the profileration of LEA awards and material gain is now regarded as antisocial just as learning for earning is regarded as distinctly inferior to learning for its own sake. But I notice that even those who decry material gain and drop out from society are quick to accept the fruits of technology and to squat in houses which have resulted from the labours of others.

To return to my brief - education and industry in the development of a better society. There is no doubt that a better society is completely dependent on the advances of modern technology. There is no other way. Nor can we rest in the hope that the fruits of past technology will provide for our future needs. Already we are spending 20% more than we are earning in the hope that North Sea oil will cover our financial indiscretions. Whether we like it or not our future (and our present) needs cannot be met unless we ensure a constant flow of our best boys and girls into the scientific fields of knowledge. This will not happen unless their interest is aroused and stimulated while they are still at school and this is unlikely to happen when their teachers are imbued with learning for its own sake. The problem at this level is still waiting for somebody brave enough to find and to implement a solution.

Throughout the first half of the twentieth century the major technical colleges and the London Polytechnics had developed strong links with industry, if for no other reason than the fact that an increasing number of young men in industry had ambitions to better themselves and given time off by their employers they were seeking graduate status mainly with the help of London University.

Perhaps the biggest stimulus came from the 1956 Government White Paper on Technical Education which stated that the universities were not producing either in number or in quality the kind of graduates who were so badly needed in industry. Thus the Colleges of Advanced Technology were selected from ten colleges whose reputations were already assured and given preferential treatment by the Government they made a substantial contribution to fostering the links between education and industry. About the same time the National Council for Technology Awards was set up and it created a wave of enthusiasm for four year sandwich courses in which university level academic education was interleaved with professional industrial education. These were exciting days. In my own college we set up end-on thin sandwich courses with intakes of students in September and February thus using the laboratories twice over per year. Of course we had to double the number of academic staff and the Ministry of Education gave full agreement. Industry welcomed the scheme because any special training arrangements which they agreed to provide for our students would not be standing idle for six months of every year. The scheme was not limited to engineers but included for example science students and nurses who were enabled to qualify SRN as a result of their professional training and BSc. in social science because of their academic studies. Had there been closer discussions between the CATs and those implementing the Industrial Training Act the breakthrough might have been permanent.

Unfortunately the CATs found the label of BSc irresistable and after Robbins became technological universities and within a decade many of them had so diversified their courses that they can no longer be distinguished from traditional universities. What a tragedy!

The DES has tried again by setting up new polytechnics to replace the apex of the pyramid which was truncated by the loss of the CATs and once again the needs of industry and sandwich courses became a clarion call. History is now repeating itself. Polytechnics are reverting to traditional university terms and conditions.

I have spoken long enough. Let me close by quoting from the inaugural address given by Sir Willis Jackson (Lord Jackson) at Imperial College on 8th May 1972. At that time he was a Governor of this Staff College.

"As matters stand we are engaged in a scientific and technological battle with countries that can draw on richer natural resources and can bring larger numbers of trained minds to bear on defined objectives.

The battle in which we are now engaged is not simply one of prestige. It is linked with priority of scientific and technological achievement and where what is achieved in one part of the world - or well outside it - is well known everywhere within a few hours. Our scientists and technologists have become not only the guardians and generators of our national economy but the agents of a new diplomacy in which more than an expanding export trade is at stake.

They will have an increasing part to play as advisers and teachers in the progress of the under developed countries and must not only carry conviction as experts in their particular specialities but also gain respect as ambassadors of broad and sympathetic vision, sound judgement and unassailable integrity."

The question is whether the schools are encouraging our best boys and girls to become ambassadors of science and technology or whether they are not concerned with knowledge which will exert a great influence on the well being of society."

Discussion Arising

A participant commented that students in FE were overtaught in comparison with university students, with the result that they had no opportunity to become relatively independent as learners. Sir James agreed that FE did have a tendency to spoonfeed its students and that they should be taught to make better use of the library.

There was considerably debate throughout the discussion period about the fall in numbers applying for engineering courses and their replacement by students from the service industries. The question was raised as to whether colleges should try to reverse this trend, and whether they were even capable of doing so. Some reasons for the shortage of engineering applicants were mooted by Sir James and others. First, there was the inadequacy of science teaching in schools. A possible solution would be to pay science staff in schools more than teachers in other subject areas so that they would earn as much as they would in industry. Secondly, young people seemed generally dissillusioned with the material work done with technology, which they saw as a threat to ecology. Others felt that the obvious problems and challenges of the world were not in the field of engineering but were social problems. Sir James said that he had set up a department of sociology at City University in order to solve the human problems connected with industry, but the staff were more interested in considering the problems of the backward child. The question of how technology could help the third world was raised. Sir James commented that under-developed countries sent students to take courses in this country, but instead of taking much needed subjects like civil engineering, science and medicine, they often enrolled on less vital courses such as sociology. In reply, a conference member said that he thought our technology was unsuitable in any case for countries with different problems, such as India. Intermediate technology was far more useful for them.

A member suggested that we were creating a society in which there were too many chiefs and not enough indians. He cited the difficulty of getting a plummer. He felt that part of the cause was that colleges preferred to run courses with some kudos, such as management courses rather than craft courses. Sir James replied that colleges might be responding to demand, and one reason why there were not enough plummers and other craftsmen being trained was

that they were not paid sufficiently well. This led on to a general discussion about the necessity to prepare people for careers. There was some measure of disagreement amongst participants as to whether vocational education was most important than more general education for the student immediately following compulsory schooling. Sir James took the view that both for the good of the country and of the individual, it was better to prepare a student for a job in his period in full-time FE. The joy of learning for its own sake could come later, and take place in the worker's free time.

C T Ferguson,
Staff Tutor,
Coombe Lodge

The College and Vocational Education (D1)

This conference sought in the first part of the week to examine the present position in vocational further education with the objective of identifying future trends; but an immediate difficulty arose in formulating a definition of vocational FE and in identifying its boundaries; and some members felt that it embraced all education and training over the age of sixteen years. There was general agreement that the proportion of students entering engineering and technology was declining and members did not feel that this trend would be reversed, and it was noted that there had been a pronounced up-swing in the non-technological areas of vocational FE. Some mention was made of the unreliability of man-power planning but the general feeling was that some form of forward planning was desirable.

The conference then went on to consider possible changes during the next five years and a very wide-ranging set of conclusions was reached which are shown on pages 256, 257 and 258 of the report.* There was a general feeling that we are in for a period of retrenchment with a possible rationalisation of the FE system (fewer colleges, regionalisation, etc.); the requirement that resources be used more efficiently (e.g. longer working week and longer working year for the college if not the teacher; common usage of resources etc.); that new organisational and teaching methods will be needed, and the individual college, whilst finding itself a part of a system which has decreased its manoeuvrability, will need flexibility in handling problems of general and local unemployment and in fulfilling community requirements.

*The Development of FE II, Coombe Lodge Report Vol.8 No.5, 1975.

T J Russell,
Staff Tutor,
Coombe Lodge

Non-Vocational Education (D2)

This conference foresaw a greatly increased demand of all age groups for non-vocational education which it came to define as any course not having a narrow or pre-determined vocational output point. Conference resisted the idea that any education had no connection whatever with employment and felt that all development opportunities for an individual would affect his employment possibilities. Generally a need was foreseen for curriculum development which led to courses which, while vocationally oriented, had no specific outcome. This was particularly true for the 16-19 year old.

Although impending economic disaster and current gloom were acknowledged it was felt that this would raise demand rather than lower it. The willingness of LEAs to provide was a separate issue on which it was not possible to pronounce.

A substantial need for development in Adult Education was expressed. This was in terms of courses, institutions, and the training of staff.

T J Russell,
Staff Tutor,
Coombe Lodge

Curriculum Development (D3)

Conference pursued the theme of the basis of curriculum development in FE. The need for it was repeatedly expressed. Whenever any scheme for comprehending the organisation of the process was discussed the need for organisation was accepted but the particular scheme under discussion hotly disputed. Witnesses were received and the consensus reached that the focus was shifting into the colleges. Hesitation was expressed that the focus should be more with the curriculum teams than with the management as conference frequently ill-perceived that this was the wish of the tutorial team.

Concern was expressed that when all had been said, there was a great need for staff development and clear organisation in the college.

J Latcham,
Staff Tutor,
Coombe Lodge

Trends in the Provision of Courses in Technology (D4)

This conference started its deliberations with a review of the statistics of student numbers on courses in engineering and technology as defined in DES statistics. The table on page 344 of the report* crystallises the situation by

*The Development of FE III. Vol.8, No.6. 1975.

reflecting recent trends. Apart from the absolute decline in student numbers in engineering and technology, there emerges the fact that this group has lost its position of pre-eminence in the FE sector. Decline in student numbers is almost entirely as a result of the reduction in the number of young workers accorded day release by their employers, there has also been a very marked reduction in the numbers following the part-time 'evening only' pattern.

One of the most surprising features of this conference was the inability of any of the members to demonstrate, for his college, any substantial departure from the general pattern. There was general agreement as to the reasons for the decline, the most significant of which were:-

(a) A change in the methods of working in industry which had led to the replacement of craftsmen by skilled operators requiring shorter periods of training.

(b) A general lack of incentives for employers to release workers and for workers to undertake training.

(c) The general unattractive image of engineering and technology in the eyes of young people.

In conference discussion members sought evidence as to likely changes over the next few years, the conclusions were that the tendency for industry to require less craftsmen was likely to continue but that there would be an increase in the need for technicians. It was agreed that although the development of programmes for the awards of the Technician Education Council would result in a far-reaching re-appraisal of technician courses, the effects of the proposed rationalisation and present financial stringency was likely to reduce rather than increase the total 'volume' of work. There was no evidence of any demand for courses in engineering and technology which would reverse the decline in student numbers over recent years. There was evidence of a need for a more flexible response to industrial requirements but these were likely to be in the form of comparatively short, specialised courses with a comparatively low yield of student hours.

In face of a clearly recognised reduction in demand for courses, the conference agreed on the need for departments of engineering and technology to prepare to re-deploy staff, considerable effort would be required in maintaining the alignment between course offerings and the needs of students and industry but it was likely that some teachers of engineering and technology would need to be prepared for employment in other areas of college activity.

C T Ferguson,
Staff Tutor,
Coombe Lodge

The Development of New College Organisation Structures (D5)

This conference examined the present situation in the organisation of Further Education, considered the trends that existed for change in organisational structures, identified factors and constraints that exist and may exist in the near future and considered what new college organisational structures will be needed and evaluated alternative possibilities.

One syndicate gave special consideration to the problems of college mergers (all members of that syndicate being concerned with mergers of one form or another) and they recognised that there would be particular problems in setting up new structures in the areas of:-

1. Communications and information gathering;
2. Decision-Making;
3. Structures;
4. Staffing.

In the first case it was felt that some troubles could be avoided by having a co-ordinator with specific responsibility for this area and authority to take necessary action. In the second area difficulties could be avoided by ad hoc working parties with very specific terms of reference.

In the third case it was desirable to have flexible structures in the early days of a merger designed to promote educational objectives and these structures must be clearly understood by all members of the organisation.

In the case of staffing the major consideration seemed to be on methods of reducing staff numbers and on processes of retraining.

Consideration was given by all groups to three types of structure:-

1. Departmental Structure
2. Matrix Structure;
3. Faculty Structure;

and the various advantages and disadvantages of all three were discussed and the general feeling was that an organisation based on the departmental system could operate successfully albeit in some modified form and that the disadvantages claimed for the departmental structure could apply to other organisations. It was also felt that in the changing educational, economic and evolutionary situation, change in traditional college structures was not a panacea but may well be appropriate as viewed from within particular college situations.

D C Spencer,
Senior Staff Tutor,
Coombe Lodge

The College and Other Educational Institutions (D6)

This conference examined the present relationships between colleges and other educational institutions and sought to identify likely major developments. Such territory is by nature diffuse.

The relationship which emerged as pre-eminently important for the typical FE College was that with schools. The relationship - or absence of one - in the past had been characterised by "an unbelievable degree of ignorance". In more recent years there had been growing awareness of the nature of each other's contribution. Where mutual distrust and suspicion remained it often centred around competition for 16+ years students.

The integration of FE Colleges with schools is an emotive topic and currently there is need to examine the provision of education of the 16-19 group and to rationalise provision whether it is to be provided in FE Colleges, Schools or in integrated institutions. In this process of rationalisation the position of the Director of Education is seen as one of great difficulty as individual schools and colleges come to enjoy increased autonomy.

Quite apart from the 16-19 question, relationships between schools and colleges will have to be improved with regard to:-

(a) The linking up of curriculum

(b) The rationalisation of subject provision

(c) The sharing of resources

(d) The flow of information about each other's modes of operation

(e) The guidance given school pupils about opportunities offered by the college

(f) Joint educational activities outside school and college premises, e.g. adult literacy schemes and community work.

Linked courses had grown rapidly in many areas but were usually being paid for twice. Attention was drawn to the introduction of transfer payments from schools to colleges in some authorities and this practice was expected to become widespread.

The second major focus of attention was on "the College's Extending Boundaries". A clear picture was established of a continuing proliferation of:-

(a) activities which took place outside the college;

(b) links with external organisation in connection with College based activities. Typical of the first group were:-

i) Student's projects
ii) In firm education
iii) Work experience programmes.

Typical of the second group were:-

(a) Industrial and commercial firms.

(b) Local officers of Government Departments notably Department of Health and Social Security and the Department of Employment.

(c) Local authority officers, particularly in Social Services Departments and in the careers field.

(d) Voluntary bodies.

This proliferation of external contacts was seen to be particularly marked when a college entered a field such as work preparation for handicapped young people.

Again the development of a comprehensive student counselling service covering educational, vocational and personal guidance was seen as giving rise to negotiations with a large number of specialist agencies in order to obtain the appropriate help in such matters.

Among other topics touched on more briefly without reaching firm conclusions were:-

(a) the prospect of greatly increased co-operation between colleges on a regional basis; possibly leading to some form of regional control;

(b) the great variety of educational and administrative practices that arise from the existence of a large number of discrete examining and validating bodies.

C M Turner,
Staff Tutor,
Coombe Lodge

The College and its Public and Community Relationships (D7)

This conference was concerned with the college as it relates to its environment, and the general mood was to talk about moves towards a more open college. Some of the organisational correlates of this, and particularly concepts of boundary and membership, are examined in my paper.

Professor Stacey traced the development of definitions of community particularly emphasising the "tension between warm feelings of belonging, knowing who you are, having people to care for and to care for you - and

the feeling of frustration, being trapped .....". She examined the reasons for current interest in the community. "I think that we are searching, much as we did in the 19th century, for some ways of solving what we feel to be the problems of modern society". The growing emphasis is on "man conceived in his wholeness rather than in one or another of the roles, taken separately, that he may hold in a social order."

Professor Swift made a powerful indictment of present-day institutionalised education, and claimed that "If we are to educate, there is no doubt that institutional schooling (this includes college and university) cannot possibly meet that need." "Education in post-industrial society will demand the provision of access to valued knowledge for all people, at all stages of their life, and on their terms." Whatever else, the community is going to be served in a different way in the future.

Members and witnesses described their own various activities, some of which are described in the paper. The factors in future development that were identified by the syndicates were as follows:

(1) Bleak economic climate, so little prospect of heavily capitalised projects such as Sidney Stringer College.

(2) A larger pool of unemployment which the college may find ways of serving.

(3) Increased provision for women, to satisfy their changing role, their political and social aspirations.

(4) Constant retraining as a major part of the work of the College.

(5) Increased and more skilled catering for the disadvantaged, particularly the handicapped and ethnic minorities - and particularly more skilful liaison with other social agencies.

(6) More leisure provision.

In order to release money and energy for these various activities, there will be more co-ordinated and rationalised use of resources leading to increased central control where this is appropriate.

A Albrecht, Staff Tutor, Coombe Lodge

The College and the Local Education Authority (D8)

The conference was set the following task: "In the light of present trends to identify the relationship between the Local Education Authority and the College of Further Education, and in this context to recommend the type of development planning that the College should propose to its Local Education Authority."

The conference view was that at the present time there were many different patterns of relationship between particular Local Education Authorities and individual colleges. Circular 7/70 had only served to establish general ground rules. These rules had been subject to a wide measure of interpretation according to such local factors as the personalities involved, the size of the authority and the number of its constituent colleges, and the size and level of work of a particular college. Having reviewed their own experiences in the light of the Devon Case Study the members concluded that at the present moment there was no such thing as a standard authority/college relationship.

On the other hand there was general agreement that there were a number of present trends which would affect the future functioning of authorities and colleges. Public Expenditure was entering a period of restraint, and further education, along with education as a whole, would face a severe decline in its rate of growth in resource terms. There would be renewed emphasis on the planning and control of resource use in education, and this trend would be accelerated in some areas by the impact of Corporate Management. In the closing lecture Mr. Brighouse reiterated the view that the outlook for further education was one of relative financial stringency. He made the additional point that on present predictions total student numbers wanting to enter both advanced and non-advanced further education should go on increasing for the next six years. However, this was just a forecast of total demand, and the real problem was that with few exceptions it was impossible to predict which areas of work would face continued expansion, and which a static or declining demand. In these difficult circumstances it was essential in his view for new regional advisory bodies to be set up with a wider remit to plan and co-ordinate the local authority provision of further education, and he also suggested that in the light of the experience of the Open University, it was worth exploring whether an Open College of Further Education could provide a necessary element of flexibility for future provision.

In looking to the future the conference concluded that local education authority/college relationships should become more standardised, and that these relationships should include the following common elements:

"(a) In consultation with the colleges the LEA should produce a clear and positive statement determining the character of each college and its place within the local educational system. Provision should be made for review as necessary.

(b) Within clearly defined and agreed parameters a college should have maximum freedom in the use of its global budget subject to a mutually agreed method of data-based build-up and monitoring procedures.

(c) The main monitoring factors should be staff/student ratios and class/course based data. Such information should be available to the LEAs, the Governors, the Academic Board, and other colleges within the authority.

(d) Within the restrictions and accountability necessarily imposed by the above statements of policy and budgeting arrangements, colleges would have an increased degree of freedom in their internal affairs and this might require radical changes in the internal management structures of colleges.

(e) Each college should draw up, submit to and agree with its LEA a development plan covering the next five years. Such plans should be updated annually."*

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*Points (a) - (e) are extracted from a syndicate report in The Development of FE V, Vol.8 No.8, 1975. Page 591.

D C Spencer,
Senior Staff Tutor,
Coombe Lodge

THE FUTURE OF FURTHER EDUCATION

AN EXERCISE IN THE DELPHI METHOD OF TIME-SCALING

Introduction

The Delphi method originated in studies for the Rand Corporation and was first reported in 1963. Since then it's use has spread as a means of determining the pattern of expert opinion as to the likely timing of future events. The essential features of the Delphi techniques are:-

(1) Completion of questionnaires by a number of individuals who possess considerable knowledge of the field under consideration.

(2) Some simple statistical analysis of the completed questionnaires.

(3) The feeding back of the overall statistical outcomes to each individual.

(4) The individuals whose opinions lie at the extremeties of the distribution of answers to each question then explain to the other participants why they hold such 'extreme' views.

(5) The questionnaire is circulated again so that each person has the opportunity of changing his original opinion in the light of the additional information he has received.

This cycle may be repeated two or three times in order to elicit all the significantly different perceptions and in so doing move towards a greater degree of consensus.

The exercise that follows has to be seen in relation to the conference activity within which it was set. While its primary purpose was to reduce the spread of members' opinions as to the likely timing of future events, it also served to remind them of the wide range of imponderables with which they were necessarily involved in any consideration of the future as well as providing a structure within which a wide variety of divergent opinion could be rapidly explored.

Comment

In-Service

Each conference member received a questionnaire. The responses were analysed in order to identify those members who:

(a) For each question in Part I were earliest or latest with their estimates.

(b) For each question in Part II had the highest or lowest values in the 1990 column.

(The time available precluded consideration of the other two colums)

This questionnaire was returned to each member and in plenary session the members identified at (a) and (b) above were asked to outline briefly the thinking that led them to hold such "extreme" views: and the members as a whole were invited to review their previously recorded opinions.

During this period about 80% of the membership changed their answers to one or more questions.

In a concluding plenary session a summary of the results of all the final answers to the questionnaire was presented. This summary is in an appendix. (Some figures having been rounded to avoid any suggestion of spurious accuracy.)

Conclusion

The results of this exercise are not to be regarded as an authoritative forecast of the timing of future developments in Further Education; but the exercise demonstrated that the Delphi technique provides a useful method of rapidly establishing the wide range of opinions held and of exploring the bases of these opinions. This in turn led to a reduction in the range of differences of opinion.

Questionnaire

DELPHI EXERCISE - THE FUTURE OF FURTHER EDUCATION

PART ONE

In answer to each question, place one tick in the appropriate box.

	Before 1980	1980-1989	1990 1999	NOT Before 2000
1. When do you foresee a unified set of regulations for the 16-19 age group?				
2. When will the state assume responsibility for the cost of all vocational training of 16-19 year olds?				
3. When will there be standardisation of grant entitlements for all full-time students without regard to age or level of study?				
4. When do you see the 'Regionalisation' of the provision of:				
a. 16-19?				
b. HE?				
5. When do you see the 'Nationalisation' of the provision of:				
a. 16-19?				
b. HE?				
6. When do you see the widespread adoption of a transferable "credit" basis in:				
a. Technician Level Education?				
b. Craft Level Education?				
c. Higher Education?				

PART TWO

In answer to each question, enter in each of the three columns your estimate of the number (or proportion) in the years 1980, 1990 and 2000.

		Assume Present Position To Be	1980	1990	2000
7.	What proportion of the GNP will be spent on education?	10%			
8.	What will be the statutory upper age limit for compulsory full-time education?	16			
9.	What proportion of the age group 16-19 will be full-time education?	25%			
10.	What proportion of full-time students aged 16-19 will be in:				
	a. Schools and VI Form Colleges?	75%			
	b. Colleges of FE?	24%			
	c. Integrated Tertiary Institutions?	1%			
11.	What % of young workers (16-19) will have part-time day release for education and training? BOYS	40%			
	GIRLS	10%			
12.	How many mature students (over 25) will there be on courses leading to a recognised qualification in:				
	a. full-time?	50, 000			
	b. part-time day?	150, 000			
	c. evening	150, 000			

	Assume Present Position To Be	1980	1990	2000
13. What proportion of education awards (credits) will be awarded as a result of independent study (including OU, correspondence courses, etc.): a. HE?	5%			
b. FE?	1%			
14. How many hours per week will the student spend in face to face contact with teachers: a. HE?	16			
b. FE?	22			
15. What proportion of FE staff will be trained teachers?	40%			
16. What do you expect the average Student Staff Ratio to be? a. HE?	7-8			
b. FE?				
17. What proportion of members of Governing Bodies of FE Colleges will be:				
a. Elected Staff?	10%			
b. Students?	5%			
18. What proportion of membership of Academic Boards of FE Colleges will be:				
a. Elected Academic Staff?	35%			
b. Elected Non-Academic Staff?	2%			
c. Students.	10%			
19. What number do you expect to be on short (one term or less) full-time vocational training in FE Institutions?	10,000 - 15,000			

D C Spencer, Senior Staff Tutor, Coombe Lodge.

Introduction to the Project

Mr Spencer asked members to spend some of their time in the syndicates reviewing the material presented at the earlier development conferences by considering the distillation of the main findings presented by the tutors responsible for each of the eight conferences, and also looking at some of the papers and syndicate conclusions published in the Coombe Lodge Reports of the conference series. He suggested that syndicates might wish to discuss some of the issues, but suggested they avoid going over too much detail.

Secondly, having got a picture of what previous conference participants and speakers had said, members were invited to look to the future. While the 'medium term' team indicated some time in five to seven years, some participants might prefer to look seven to fifteen years ahead. Mr Spencer suggested therefore that each syndicate decide on a point in the future upon which to focus, in order to reduce possible confusion. Mr Spencer explained that these major developments in society and FE were changes brought about by environmental influences which would occur regardless of action by any college, group of colleges or any group of people concerned with FE acting in concert, for example, entry into post-industrial society or a decision to provide more education by a factor of 10 or even 100.

Moving to the third part of the project, Mr Spencer said that this concerned changes which could be influenced by people in the colleges. The only way to conceptualise what to do was to write down educational objectives. It was important, however, that syndicates confined themselves to the practical when doing this. This stage of the project was really concerned with trying to discover what practical steps we in FE might take now so that we will be better able to cope with the situation in ten years hence.

A Synthesis of Syndicate Conclusions

There was unanimous agreement that the demands to be placed on FE Colleges for education and training would increase very considerably in the period under consideration, but there were likely to be relatively small increases in resources of all kinds. The inevitable conclusions were drawn that an all activities had to become progressively more efficient and effective: this provided a unifying feature to virtually all the eight syndicate discussions.

Major Developments in Society and FE in the Medium Term

No-one foresaw any rapid transformation into a revolutionary novel type of 'Post-Industrial' Society but there was general recognition that there are already present movements which if persisted with could radically change the form and content of FE. The developments likely to have profound effect included:-

(a) Recent recognition of the great need for short intensive retraining programmes which could be taken throughout the individual's working life as changes in technology, the structure of industry, personal development, etc, made the individual wish to extend his skills and knowledge. The contribution of the Manpower Services Commission and in particular the Training Services Agency in developing thinking in this area was seen as particularly significant.

(b) The extension of the colleges' educational offerings through the field of traditional adult education into local communities in a wide variety of out-reach activities. Many of these are intended to ameliorate in some respect the condition of the underprivileged and were thought by some members to clearly imply the holding of social as opposed to purely educational objectives by the college authorities.

(c) The growth of formal management controls. Since the reorganisation of local government the introduction of corporate management techniques had made it increasingly necessary for Directors of Education and College Principals to compete for local funds in direct and open opposition to Social Services and Housing Departments and to do so in a climate of closed political opinion which generally favoured the latter. Performance indices are being used on a progressively larger scale to assess the comparative efficiency of colleges, and these were beginning to have an astringent effect on resource provision - especially academic staffing.

(d) The shifting forces of attention from 'teaching' to 'learning'. Improvements in understanding of the psychology of learning were leading to the critical review of our conventional classroom methods and to a more sophisticated approach to the development of the curriculum.

(e) The appearance of the Open University had led to widespread appreciation of the desirability of creating a more 'open' system of education generally with all its 'modular' implications as well as to the practicability and economy of the central creation of high quality learning materials.

(f) The continuous developments of radio and television in educational media. The Adult Literacy programme begins to give an inkling of the immense possibilities at the lowest level of attainment while the Post Office's project, due to start in 1977, will use the domestic TV set as the Video Display Unit for information - including a range of course materials - held on a network of computers and accessed by telephone line.

(g) The growth in participative practices in college management. While evident in the increasing influence of committees at all levels of the college perhaps its most notable achievement has been the increase in authority exercised by college Academic Boards in very recent years. This was perceived as leading as a matter of course to the diminution of the importance of Governing Bodies, if not their demise.

What we must to to facilitate progress

The answer to the prior question "Progress to What?" seems to be clear. It is "A more open, flexible, economic system of further education at once relevent to the needs of a democratic society, of an industry based on advanced technology and of individuals who work for their living, enjoy their leisure and cope with life's difficulties".

What one must do was usually divided by syndicates into a number of levels: in summary we will use three;

(a) College.
(b) National.
(c) Local and Regional Authorities.

College

Within the college perhaps the single most beneficial change would be from it being 'teaching' centred to 'learning' centred, with all that this entails. Such a shift is almost a prerequisite of the college becoming open, flexible, economic and relevent to individual students as well as industry and society at large; but, it will only occur at all rapidly and smoothly if planned and worked at (for). This staff development may be best done through the vehicle of a Development programme aimed specifically at creating 'learner created curricula. These Curriculum Development working parties are at once the means by which the orientation of the institution is changed and by which individual members of the staff acquire some of the skills that will be necessary in the new situation. In some colleges working parties will concern themselves with the needs of new categories of student, the handicapped, the retired, the unemployed; in some they will prepare packaged learning materials to reduce the need for face to face contact; others will incorporate existing externally prepared learning materials, possibly those of the Open University; others will attempt to rationalise the courses/subjects already offered so as to increase class size and/or give students a wider choice of subject matter: these are the things that curriculum development teams can help us to do.

The precise form of organisation structures are not seen as of crucial importance, but there is a need to reduce the diseconomies that exist from the presence of too rigid departmental boundaries which prevent the ready transfer of courses to the place where they could be most profitably used.

There was general agreement that a college will best cope with its imminent changes by working towards an 'open-book' approach. This could mean the creation of a management information system which collected, analysed and displayed data about the nature, scale, and degree of success of activities throughout the college. This would enable the college management, the Academic Board and its sub-committees to function more effectively.

National Level

It was strongly felt that there is inadequate consideration of FE Policy at National Level particularly in relation to 16-19 age group. For the group the production of unified regulations would seem to be a significant contribution to the remedying of current diseconomies and other difficulties that arrive between schools and colleges. Impressed by the progress made by the Training Services Agency both in clarifying national policies and in its achievements on the ground. Members argued for a strengthening of the central direction of Further Education and for a clarification of objectives at that level: a clarification that would lead quite rapidly to a rationalisation of the present wasteful over-elaboration of course provision which stems from the existence of a multiplicity of examining and validating bodies. Similarly it was advocated that there should be a strong central body - The Open College possible - which would develop both comprehensive codifying frameworks as well as detailed curricula for a wide range of nationally used courses.

Local and Regional Authorities

It was urged that competition between colleges and between colleges and schools must be replaced by co-operation of a formerly undreamt of scale and refinement. Effective co-operation would only be achieved by the local education authority, colleges and schools defining precisely the extent of the delegated responsibilities and the local authority strengthening its relative position so that it can act decisively when the occasion requires. The Open Book approach already outlined for information flow within the college would extend to its relationship with their Local Authority

The transfer of responsibility for Higher Education from local authorities to new regional authorities was seen as almost certain and something which should be brought about as smoothly as possible, recognising that the new authorities - if effective - would control colleges far more closely than their present co-ordinating arrangements.

Response to the Syndicate Reports

At the end of each of the conferences, syndicates presented their reports to a guest speaker, who then commented on a number of points made in the reports. The conference which took place in the first part of the week made its presentation to Sir Lionel Russell, CBE, and the second conference addressed its findings to Mr. J F Mann, Deputy Chief Education Officer, Sheffield.

Sir Lionel Russell, CBE, Fellow of Further Education Staff College.

(Study Conference 75/39a)

"I was delighted to see that participants believed that FE colleges should meet the demands not only of students and staff but of the community as a whole. As one of the syndicate spokesmen said, the colleges are provided by the community, and the community is beginning to feel more strongly than before that it has a right to share college resources. Of course, there are facilities which have a limit to the amount of use they can stand, such as playing fields, but it is all too easy for colleges to fall into the trap of limiting the use of

expensive facilities to its regular students, simply because it is easier. In the future, this position will become more and more difficult to defend.

Nearly all the reports stressed the need for regional coordination. Even without the present economic difficulties this would be worthy of the closest consideration, but now the need is urgent. Most of the participants here are reconciled to a standstill or even something slightly worse than this for the immediate future. We need to guard against interpreting this standstill as simply the same type of provision, though perhaps somewhat condensed. I fear that the less informed members of LEAs may think that the current situation means that there can be no new developments. Of course, it is unlikely that there will be any extra money available to finance these new developments, so they will have to be brought about by such measures as have been touched on in the syndicate reports - a reduction in class contact hours, construction of more related courses with common core material so that large numbers of students can be taught together for some of the time, and cutting out the "dead wood". Such exercises should be taking place at any time, but in the present situation, unless they do take place, I fear that there will be a halt to development, which would be a tragedy.

Two of the syndicate reports commented on the increasing interest in curriculum development. There is no doubt that the Schools Council has made a major contribution to curriculum development for schools, and for many years I have wondered why there is no parallel FE Council. Of course, many members of the Schools Council would like to see its work extended to include FE, and they would be the first to admit that there would need to be some modification in membership with additional representation from industry and commerce. Personally, though, I doubt whether, even if modified, the Schools Council would be the right body to deal with curriculum development in FE. But I am convinced that the task must be entrusted to someone.

I was pleased to see that one syndicate spoke of the need for FE and HE to be a unified service, for I have always believed that education should be one and undivided and that universities should not be divorced from the rest of the sector. Within individual bodies such as the National Advisory Council on Education for Industry and Commerce and the Regional Advisory Councils individual members of universities often liaise successfully in order to create links across the bindary system, but the difficulty is that universities are independent bodies under Royal Charters, and Vice-Chancellors and Senates are naturally reluctant to enter into any arrangement which might threaten that independence. This is one of the major problems in the context of cooperation between the two parts of the further and higher education sector.

The same syndicate made a minor but significant point regarding the use of the LEA advisory service by FE institutions, which is another aspect of the concept to education being one and undivided. Unfortunately, in the past many LEA advisers have been appointed to work only in the schools field, although many have expertise and experience which would be invaluable to FE.

This is not to deny that some of them give most generously of their time and knowledge to the FE sector, but it has often not been a condition of their appointment to do so.

On the question of tertiary colleges, I very much hope that the syndicates are right in envisaging their steady growth over the next few years. I doubt if there will be a very rapid increase in their numbers though, because to be really effective a tertiary college, like a comprehensive school, needs considerable help from a building programme and should as far as possible be purpose built. Nevertheless, I find it surprising that according to DES figures quoted in the paper by Colin Turner* only eight LEAs have managed to launch tertiary colleges as opposed to sixth form colleges. Another aspect of this issue was raised by a syndicate which recommended an immediate change to a more logical pattern of finance in FE. This must include the creation of more common regulations for schools and colleges. At present sixth form colleges come under school regulations while tertiary colleges are under FE regulations, and this has a considerable effect upon some of the financial arrangements.

One syndicate said that the work of the FE colleges during the next decade will closely reflect the changing needs of society - more education for women, more community links, special provision for the disadvantaged. I think that the force with which they expressed this view is rather optimistic, although the sentiment is right and I hope that we move in this direction.

To summarise, unless we can make various changes in the FE sector, by various forms of rationalisation and by up-dating curricular, I think that there willbe a cessation of development, which would be lamentable."

J F Mann, Deputy Chief Education Officer, Sheffield.

(Study Conference 75/39b)

Mr Mann began his response to the syndicate reports with a general remark on forecasting, and then moved on to examine some of the points raised in more detail.

"We should bear in mind that forecasting is a dangerous art unless practised with some degree of caution. It is all too easy to believe that what is forecast must be true, and then the forecast becomes a self-fulfilling prophecy. Selection at the age of 11 was an example of this. However, forecasting is valuable in throwing up a range of possibilities for the future and we are becoming increasingly aware of this benefit in our current state of uncertainty. We are uncertain of the future and uncertain about the relationships we have with our environment. This brings me to my second point, one which is implicit in many of the syndicate reports, that we do not any longer operate in closed systems. Once, we may have believed that education was a closed system, and that its aims could be worked out quite independently of its

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* C M Turner, Educational Provision for the 16-19 Age Group. The Development of FE I, Coombe Lodge Report Volume 8, No. 4, 1975.

environment, but now we have begun to realise that, certainly as far as FE colleges are concerned, the environment would include the local authority, the DES, the national economy, the local community and so on.

Perhaps I might concentrate for a short while on one or two aspects of this, as what happens outside education will be important for those involved in it.

First, there is the role of central government. I am concerned about the way things seem to be moving at the moment. There seems to be an indication of an increasing involvement of central government in education and in local authority services generally. We are receiving very precise directives from central government about how local authorities should behave. For example, Circular 88/75 states that resources must be directed to the 5 to 16 age group who are in the compulsory stage of education and that higher education provision for increased numbers of students should largely come from existing resources through better management. The Circular also says that the more marginal services such as community education should not be extended at all. Thus central government is concerned more closely than ever before with the exact way in which local authorities spend their money.

What then, is the place of education in local government? Sir Frank Marshall who was the leader of the Leeds City Council and a member of the Bains Committee, reflecting on the way the Bains idea had been translated into practice with the reorganisation of local government, said that the aim of Bains had been to make democracy more efficient, not to make efficiency more democratic. He expressed concern about the way in which committees, working parties, sublcommittees, ad hoc groups and so on had multiplied in local authorities, so that there are a plethora of meetings for local councillors. My impression is that the councillors are now devoting themselves far more than hitherto to the minutiae of daily business, rather than being concerned solely with policy making.

We all know that in the new local authorities education takes roughly two thirds of the budget, and that the next biggest services take very much less indeed - probably a third or a quarter as much. This means that if local authorities need to economise they must do so in the biggest service - education. I had the task a few months ago of writing for the Society of Education Officers their contribution to the Layfield Committee on Local Government Finance, and we then felt ourselves able to say that we were 'local government men' and that it was absolutely right that education should be a local government service. My impression is that we are now having doubts about this. My personal opinion is that education lies increasingly uneasily within the local government structure and that if the Society of Education Officers were making recommendations to the Layfield Committee now, it might suggest that education moved to a position more akin to that of the National Health Service, with areacommittees and community representation at governing body level for both schools and colleges. Given the plight of local government, I would not put this sort of solution outside the bounds of possibility within the next 10-15 years.

At the moment we have, I think, one of the most highly devolved systems of education in the world, with the exception of the USA. The DES, despite its increasing intervention, has a minimal role in education policy making. There is considerable devolution to individual institutions through their governing bodies and their Principals and a convention that the teaching profession should be autonomous in academic matters. This contrasts sharply with practice in many other countries. It is interesting that in France and in the Netherlands recently there have been strong moves towards devolution and that Sweden is already on the way to it, while we in the UK are moving towards greater centralisation. I wonder whether we will all come to a middle position in the next decade or so? The conflict between a centralised system, for which there is always pressure in times of stringency, and devolution to institutions lies behind much of what is in the syndicate reports. It is connected with the suggestion by one group that there should be rationalisation of courses between schools and FE colleges. It is important that the drive for rationalisation should come at school and college level. It is important that Principals and Heads should be seen to be working together, because it may otherwise be forced on them by LEAs.

One or two aspects of the FE system disturb me. The first concerns the training of staff. The latest DES Statistics of Education on FE, containing summary tables for 1972, show that between 1961 and 1972 the proportion of graduates teaching in grant-aided FE establishments dropped from 39.8 to 35.1. Between 1966 and 1972 the proportion of graduates was virtually constant and the proportion of those who were trained increased marginally from 32% to 34%. The reasons are obvious. Much of what is taught in FE colleges, is to a considered degree, vocational, so in recruiting staff the most important qualification is a craft or professional qualification, and the possession of a degree or qualified teacher status is secondary. In essence, therefore, we are expecting our students to learn traditional skills by sitting next to Nellie. Many of the criticisms of the apprenticeship system of training might justly be levelled at the FE system as a whole. One of the syndicates spoke of the conservatism of FE institutions. It seems to me that the reason why they are conservative might be because the bulk of the staff are not people who have been encouraged through a prolonged exposure to education and training to think about the nature of the education process, the nature of society and so on. I was saddened, therefore, to see the rather gloomy forecast in the Delphi exercise of the likely extension of training of FE teachers, for I believe that it is one of the most important things to be done.

There are various ways of approaching the training of FE teachers. Two possibilities are that in-service training could be instituted on a much larger scale and LEAs could appoint FE advisers, which very few do at present. Sheffield has decided to appoint a senior adviser and a general adviser with strong FE links and their role will be concerned among other things with strengthening liaison between schools and colleges: rationalisation of courses, making schools aware of the opportunities which exist in FE and so on.

Another aspect of the conservative nature of FE is its conditions of service. The ATTI must take the palm for its success in negotiating conditions of service which are capable to being interpreted in a very restrictive way. This seems to me to be dangerous, and I would hope that in any unification of the provision for 16-19 year olds there would be established conditions of service which are somewhat more open than those which the ATTI have managed to negotiate.

The question of incentives for good management is another issue which should be tackled. Several syndicates referred to the shortage of resources and the need for improved efficiency. One great problem is that apart from personal satisfaction, there is virtually no incentive for good management, and somewho these need to be built into the system. One small way in which Sheffield has done this with regard to the consumption of fuel, is that the LEA has divided any savings achieved with the institutions themselves.

On the issue of resources generally, I do not feel quite so gloomy as some of the participants at this conference for two reasons. Firstly, in relation to plant, even if there is great restriction of local authority expenditure overall on education, the expenditure on schools will drop considerably over the next ten years. The school population has now reached a peak. The primary school population is already going down and the secondary school population will start to decrease over the next two of three years. In some authorities, the drop will be colossal. In Inner London it may be as much as 30% within the next eight years. With the exception of new towns and suburbs, it will be virtually impossible for LEAs to make a case for basic need school building, so if students are forthcoming there should be a possibility of the government making capital available for FE building. As far as revenue expenditure is concerned, the fall in expenditure will not proportionate to the fall in school population, but LEAs will certainly be spending much less in real terms on the school age population, so there may be room for expansion of FE.

Another aspect of conservatism in FE, due perhaps to the high percentage of untrained academic staff, is that there seems to be a great deal of overteaching in FE colleges. I believe there would actually be better education if there were less teaching, and then it would be possible to accommodate more students with the same number of class contact hours for staff as at present, to the benefit of students.

With regard to the likely percentage of young people entering FE in the future, it is difficult to make any predictions, but we should bear in mind that 40% of school leavers now have five GCE 'O' levels or one 'A' level, so are qualified to enter academic courses, and 90% of school leavers have at least one CSE, according to DES statistics. Thus a high proportion of school leavers have the qualifications required to go into FE and the number who do so will probably depend on social trends and economic forces.

Syndicates mentioned the possibility of FE increasing its 'at cost' courses, which might revolutionise FE provision. Negotiations are at present underway with the oil sheiks for the sale of FE courses on a large scale and that might provide a source of income which would enable FE to flourish even if local government was in financial difficulty.

I referred earlier to the fact that while we are under pressure to move to a more centralised system of education, many countries who already have a centralised education system are moving towards devolution. There seems to be a growing belief amongst those who study comparative education that problems faced by different countries are much the same. Currently, for example, the OECD is conducting an international enquiry into the 'common school' (ie the 11-16 comprehensive school) which seems to be spreading in almost all advanced countries. Some of the concepts which underly this development are questions of equality in society, questions of how far this requires positive discrimination; the relationship between educational institutions and the community they serve; and the issue of recurrent education. It seems to me that FE has an important role to play in the achievement of these concepts."

APPENDIX

DELPHI EXERCISE - THE FUTURE OF FURTHER EDUCATION

SUMMARY OF RESULTS

PART ONE

	PERCENTAGES CHOOSING			
	Before 1980	1980-1989	1990-1999	NOT Before 2000
1. When do you foresee a unified set of regulations for the 16-19 age group?	8	69	10	12
2. When will the state assume responsibility for the cost of all vocational training of 16-19 year olds?	9	44	16	31
3. When will there be standardisation of grant entitlements for all full-time students without regard to age or level of study?	4	33	22	42
4. When do you see the 'Regionalisation' of the provision of :-				
a. 16-19?	9	41	25	21
b. HE?	24	51	8	17
5. When do you see the 'Nationalisation' of the provision of :-				
a. 16-19?	2	22	20	57
b. HE?	2	24	35	39
6. When do you see the widespread adoption of a transferable "credit" basis in :-				
a. Technician Level Education?	13	83	4	-
b. Craft Level Education?	4	46	34	16
c. Higher Education?	5	35	43	17

PART TWO

	AVERAGE VALUES OF ESTIMATES			
	Assume Present Position To Be	1980	1990	2000
7. What proportion of the GNP will be spent on education?	10%	10%	11%	12%
8. What will be the statutory upper age limit for compulsory full-time education?	16	16	16	16½
9. What proportion of the age group 16-19 will be in full-time education?	25%	29%	36%	41%
10. What proportion of full-time students aged 16-19 will be in:				
a. Schools and VI Form Colleges?	75%	68%	59%	50%
b. Colleges of FE?	24%	27%	30%	30%
c. Integrated Tertiary Institutions?	1%	5%	12%	20%
11. What % of young workers (16-19) will have part-time day release for education and training? BOYS	40%	42%	54%	63%
GIRLS	10%	16%	35%	49%
12. How many mature students (over 25) will there be on courses leading to a recognised qualification in:				
a. full-time?	50,000	60,000	70,000	80,000
b. part-time day?	150,000	160,000	190,000	210,000
c. evening?	150,000	140,000	130,000	125,000

	Assume Present Position To Be	1980	1990	2000
13. What proportion of education awards (credits) will be awarded as a result of independent study (including OU, correspondence courses, etc.): a. HE?	5%	6%	9%	11%
b. FE?	1%	2%	5%	1%
14. How many hours per week will the student spend in face to face contact with teachers: a. HE?	16	15	14	13
b. FE?	22	20	18	17
15. What proportion of FE staff will be trained teachers?	40%	45%	60%	70%
16. What do you expect the average Student Staff Ratio to be: a. HE?	7-8	9-10	11	12
b. FE?	10-12	12-13	14	15
17. What proportion of members of Governing Bodies of FE Colleges will be: a. Elected Staff?	10%	13%	15%	17%
b. Students?	5%	7%	8%	10%
18. What proportion of membership of Academic Boards of FE Colleges will be: a. Elected Academic Staff?	35%	37%	42%	46%
b. Elected Non-Academic Staff?	2%	3%	4%	5%
c. Students?	10%	12%	13%	14%
19. What number do you expect to be on short (one term or less) full-time vocational training in FE Institutions?	10,000-15,000	20,000	33,000	45,000

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